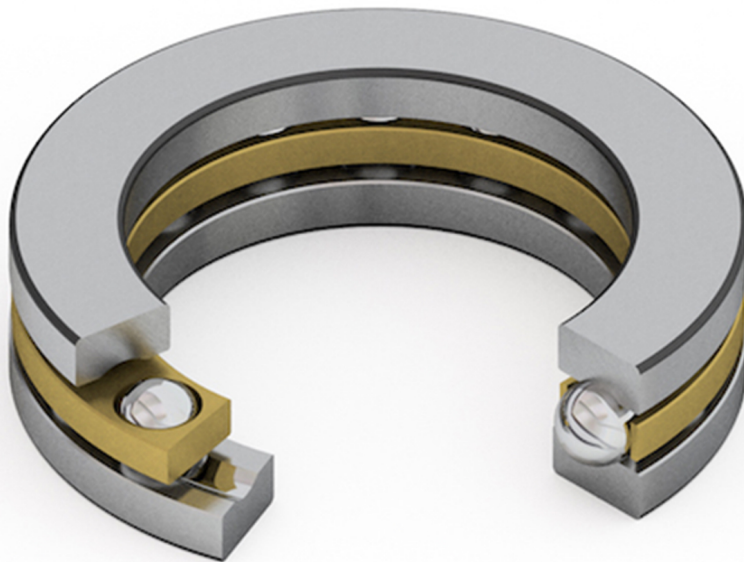


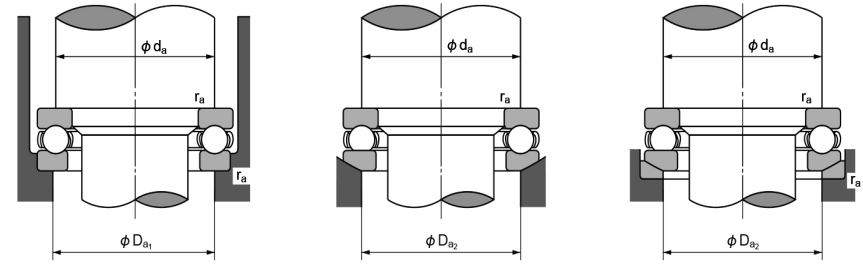
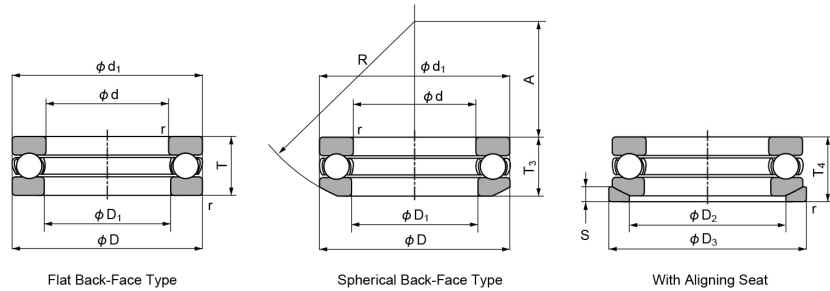
Thrust Ball Bearings:

Thrust ball bearings are designed to carry axial loads with no radial load carrying capacity. They comprise of a shaft washer, a housing washer, and a ball and cage assembly and are separable. These bearings have raceways on the face of the washers.

In double-direction thrust ball bearings, there are three rings with the middle one (center ring) being fixed to the shaft.

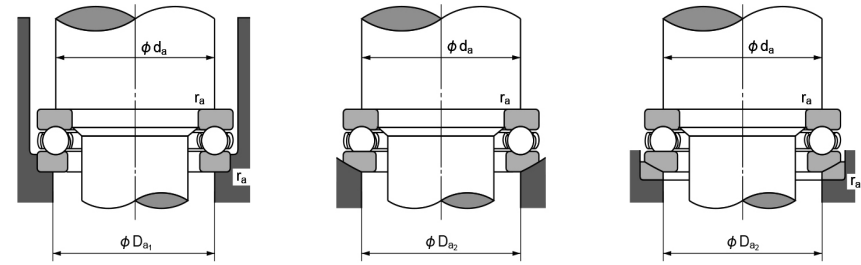
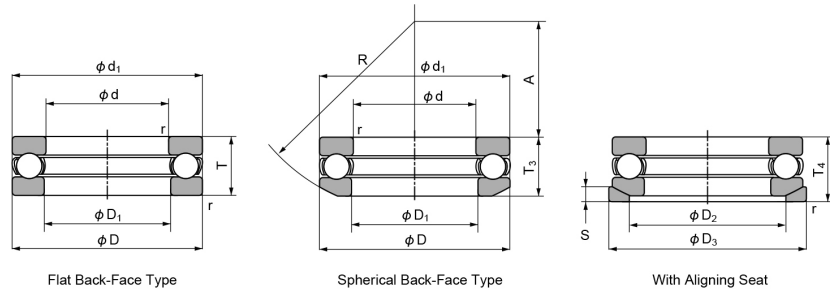


Suffix and Corresponding Description For Thrust Ball Bearing	
Suffix	Description of Suffix
M	Machined Brass Cage
No Symbol	Steel Cage
U	Support Washer
P6	ISO Class 6
P5	ISO Class 5
P4	ISO Class 4
P2	ISO Class 2



Boundary Dimensions						Basic Load Rating		Limiting Speed		Bearing Designation		
(mm)						(kN)		(rpm)		Flat Back-Face Type	Spherical Back-Face Type	With Aligning Seat
d	D	T	T3	T4	r	Cr	Cor	Grease	Oil			
					(min)							
10	24	9	-	-	0.3	10.00	14.00	6800	10000	51100	-	-
10	26	11	11.6	13	0.6	12.70	17.10	5900	8800	51200	53200	53200U
12	26	9	-	-	0.3	10.30	15.40	6500	9800	51101	-	-
12	28	11	11.4	13	0.6	13.20	19.00	5600	8500	51201	53201	53201U
15	28	9	-	-	0.3	10.50	16.80	6200	9400	51102	-	-
15	32	12	13.3	15	0.6	16.60	24.80	5100	7600	51202	53202	53202U
17	30	9	-	-	0.3	10.80	18.20	6000	9100	51103	-	-
17	35	12	13.2	15	0.6	17.10	27.30	4800	7300	51203	53203	53203U
20	35	10	-	-	0.3	14.30	24.70	5200	8000	51104	-	-
20	40	14	14.7	17	0.6	22.20	37.50	4200	6300	51204	53204	53204U
25	42	11	-	-	0.6	19.50	37.00	4600	6900	51105	-	-
25	47	15	16.7	19	0.6	27.80	50.50	3700	5600	51205	53205	53205U
25	52	18	19.8	22	1	35.50	61.50	3200	4900	51305	53305	53305U
25	60	24	26.4	29	1	55.50	89.50	2600	3900	51405	53405	53405U
30	47	11	-	-	0.6	20.40	42.00	4300	6500	51106	-	-
30	52	16	17.8	20	0.6	29.30	58.00	3400	5200	51206	53206	53206U
30	60	21	22.6	25	1	42.50	78.50	2800.00	4200	51306	53306	53306U
30	70	28	30.1	33	1	72.50	126.00	2200.00	3300	51406	53406	53406U
35	52	12	-	-	0.6	20.40	44.50	4000	6000	51107	-	-
35	62	18	19.9	22	1	39.00	78.00	2900.00	4400	51207	53207	53207U
35	68	24	25.6	28	1	55.50	105.00	2400	3700	51307	53307	53307U
35	80	32	34	37	1.1	87.00	155.00	1900	2900	51407	53407	53407U
40	60	13	-	-	0.6	26.90	63.00	3500	5300	51108	-	-
40	68	19	20.3	23	1	47.00	98.50	2700	4100	51208	53208	53208U
40	78	26	28.5	31	1	69.00	135.00	2200	3300	51308	53308	53308U
40	90	36	38.2	42	1.1	112.00	205.00	1700	2600	51408	53408	53408U
45	65	14	-	-	0.6	27.80	69.00	3300	4900	51109	-	-
45	73	20	21.3	24	1	47.50	105.00	2600	3900	51209	53209	53209U
45	85	28	30.1	33	1	80.00	163.00	2000	3000	51309	53309	53309U
45	100	39	42.4	46	1.1	129.00	243.00	1600	2400	51409	53409	53409U

Dimensions								Abutment and Fillet Dimensions				Mass Approx		
(mm)								(mm)				(kg)		
D1	d1	D2	D3	S	R	A		da	Da1	Da2	ra	Flat Back-Face Type	Spherical Back-Face Type	With Aligning Seat
(min)	(max)							(min)	(max)	(max)	(max)			
11	24	-	-	-	-	-	-	18	16	-	0.3	0.020	-	-
12	26	18	28	3.5	22	8.5	-	20	16	18	0.6	0.030	0.029	0.036
13	26	-	-	-	-	-	-	20	18	-	0.3	0.022	-	-
14	28	20	30	3.5	25	11.5	-	22	18	20	0.6	0.034	0.033	0.041
16	28	-	-	-	-	-	-	23	20	-	0.3	0.024	-	-
17	32	24	35	4	28	12	-	25	22	24	0.6	0.046	0.048	0.061
18	30	-	-	-	-	-	-	25	22	-	0.3	0.028	-	-
19	35	26	38	4	32	16	-	28	24	26	0.6	0.053	0.055	0.07
21	35	-	-	-	-	-	-	29	26	-	0.3	0.040	-	-
22	40	30	42	5	36	18	-	32	28	30	0.6	0.082	0.08	0.1
26	42	-	-	-	-	-	-	35	32	-	0.6	0.059	-	-
27	47	36	50	5.5	40	19	-	38	34	36	0.6	0.120	0.125	0.16
27	52	38	55	6	45	21	-	41	36	38	1	0.180	0.185	0.225
27	60	42	62	8	50	19	-	46	39	42	1	0.340	0.35	0.42
32	47	-	-	-	-	-	-	40	37	-	0.6	0.068	-	-
32	52	42	55	5.5	45	22	-	43	39	42	0.6	0.150	0.16	0.195
32	60	45	62	7	50	22	-	48	42	45	1	0.270	0.27	0.325
32	70	50	75	9	56	20	-	54	46	50	1	0.530	0.53	0.68
37	52	-	-	-	-	-	-	45	42	-	0.6	0.085	-	-
37	62	48	65	7	50	24	-	51	46	48	1	0.220	0.22	0.29
37	68	52	72	7.5	56	24	-	55	48	52	1	0.390	0.39	0.475
37	80	58	85	10	64	23	-	62	53	58	1	0.790	0.79	0.95
42	60	-	-	-	-	-	-	52	48	-	0.6	0.120	-	-
42	68	55	72	7	56	28.5	-	57	51	55	1	0.270	0.27	0.34
42	78	60	82	8.5	64	28	-	63	55	60	1	0.550	0.57	0.69
42	90	65	95	12	72	26	-	70	60	65	1	1.140	1.13	1.38
47	65	-	-	-	-	-	-	57	53	-	0.6	0.150	-	-
47	73	60	78	7.5	56	26	-	62	56	60	1	0.320	0.32	0.41
47	85	65	90	10	64	25	-	69	61	65	1	0.690	0.68	0.85
47	100	72	105	12.5	80	29	-	78	67	72	1	1.470	1.5	1.8



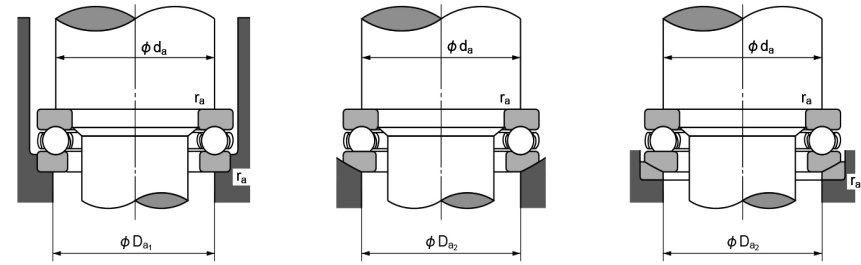
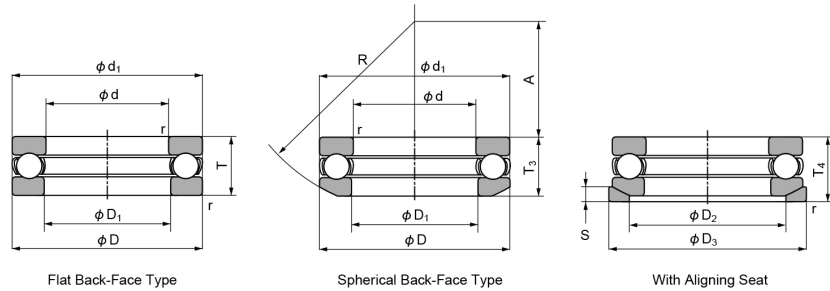
Boundary Dimensions						Basic Load Rating		Limiting Speed		Bearing Designation		
(mm)						(kN)		(rpm)		Flat Back-Face Type	Spherical Back-Face Type	With Aligning Seat
d	D	T	T3	T4	r	Cr	Cor	Grease	Oil			
					(min)							
50	70	14	-	-	0.6	28.80	75.50	3100	4700	51110	-	-
50	78	22	23.5	26	1	48.50	112.00	2400	3600	51210	53210	53210U
50	95	31	34.3	37	1.1	96.50	202.00	1800	2700	51310	53310	53310U
50	110	43	45.6	50	1.5	148.00	283.00	1400	2100	51410	53410	53410U
55	78	16	-	-	0.6	35.00	93.00	2800	4200	51111	-	-
55	90	25	27.3	30	1	69.50	159.00	2100	3100	51211	53211	53211U
55	105	35	39.3	42	1.1	120.00	246.00	1600	2400	51311	53311	53311U
55	120	48	50.5	55	1.5	178.00	360.00	1300	1900	51411	53411	53411U
60	85	17	-	-	1	41.50	113.00	2600	3900	51112	-	-
60	95	26	28	31	1	73.50	179.00	2600	3000	51212	53212	53212U
60	110	35	38.3	42	1.1	123.00	267.00	1600	2400	51312	53312	53312U
60	130	51	54	58	1.5	213.00	435.00	1200	1800	51412	53412	53412U
65	90	18	-	-	1	41.50	117.00	2400	3700	51113	-	-
65	100	27	28.7	32	1	75.00	189.00	1900	2800	51213	53213	53213U
65	115	36	39.4	43	1.1	127.00	287.00	1500	2300	51313	53313	53313U
65	140	56	60.2	65	2	231.00	495.00	1100	1600	51413	53413	53413U
70	95	18	-	-	1	43.00	127.00	2400	3600	51114	-	-
70	105	27	28.8	32	1	76.00	199.00	1800	2800	51214	53214	53214U
70	125	40	44.2	48	1.1	148.00	340.00	1400	2100	51314	53314	53314U
70	150	60	63.6	69	2	250.00	555.00	1000	1500	51414	53414	53414U
75	100	19	-	-	1	44.50	136.00	2200	3400	51115	-	-
75	110	27	28.3	32	1	77.50	209.00	1800	2700	51215	53215	53215U
75	135	44	48.1	52	1.5	170.00	395.00	1200	1900	51315	53315	53315U
75	160	65	69	75	2	252.00	560.00	950	1400	51415	53415	53415U
80	105	19	-	-	1	44.50	141.00	2200	3300	51116	-	-
80	115	28	29.5	33	1	78.50	219.00	1700	2600	51216	53216	53216U
80	140	44	47.6	52	1.5	176.00	425.00	1200	1800	51316	53316	53316U
80	170	68	72.2	78	2.1	270.00	620.00	900	1300	51416	53416	53416U
85	110	19	-	-	1	46.00	150.00	2100	3200	51117	-	-
85	125	31	33.1	37	1	95.50	264.00	1600	2400	51217	53217	53217U

Dimensions							Abutment and Fillet Dimensions				Mass Approx		
(mm)							(mm)				(kg)		
D1	d1	D2	D3	S	R	A	da	Da1	Da2	ra	Flat Back-Face Type	Spherical Back-Face Type	With Aligning Seat
(min)	(max)						(min)	(max)	(max)	(max)			
52	70	-	-	-	-	-	62	58	-	0.6	0.160	-	-
52	78	62	82	7.5	64	32.5	67	61	62	1	0.390	0.38	0.48
52	95	72	100	11	72	28	77	68	72	1	1.000	1	1.25
52	110	80	115	14	90	35	86	74	80	1.5	1.990	1.97	2.4
57	78	-	-	-	-	-	69	64	-	0.6	0.240	-	-
57	90	72	95	9	72	35	76	69	72	1	0.610	0.62	0.8
57	105	80	110	11.5	80	30	85	75	80	1	1.340	1.4	1.7
57	120	88	125	15.5	90	28	94	81	88	1.5	2.640	2.55	3.7
62	85	-	-	-	-	-	75	70	-	1	0.290	-	-
62	95	78	100	9	72	32.5	81	74	78	1	0.690	0.69	0.85
62	110	85	115	11.5	90	41	90	80	85	1	1.430	1.45	1.75
62	130	95	135	16	100	34	102	88	95	1.5	3.300	3.25	3.85
67	90	-	-	-	-	-	80	75	-	1	0.340	-	-
67	100	82	105	9	80	40	86	79	82	1	0.770	0.77	0.94
67	115	90	120	12.5	90	38.5	95	85	90	1	1.570	1.6	1.95
68	140	100	145	17.5	112	40	110	95	100	2	4.180	4.17	4.95
72	95	-	-	-	-	-	85	80	-	1	0.360	-	-
72	105	88	110	9	80	38	91	84	88	1	0.810	0.8	0.98
72	125	98	130	13	100	43	103	92	98	1	0.206	2.15	2.55
73	150	110	155	19.5	112	34	118	102	110	2	5.110	4.94	5.93
77	100	-	-	-	-	-	90	85	-	1	0.420	-	-
77	110	92	115	9.5	90	49	96	89	92	1	0.860	0.84	1.05
77	135	105	140	15	100	37	111	99	105	1.5	2.680	2.7	3.25
78	160	115	165	21	125	42	126	109	115	2	6.350	6.25	7.6
82	105	-	-	-	-	-	95	90	-	1	0.430	-	-
82	115	98	120	10	90	46	101	94	98	1	0.950	0.93	1.16
82	140	110	145	15	112	50	116	104	110	1.5	2.820	2.85	3.45
83	170	125	175	22	125	36	134	116	125	2	7.970	7.83	9.14
87	110	-	-	-	-	-	100	95	-	1	0.460	-	-
88	125	105	130	11	100	52	109	101	105	1	1.290	1.29	1.6

Single Direction Thrust Ball Bearings



Single Direction Thrust Ball Bearings



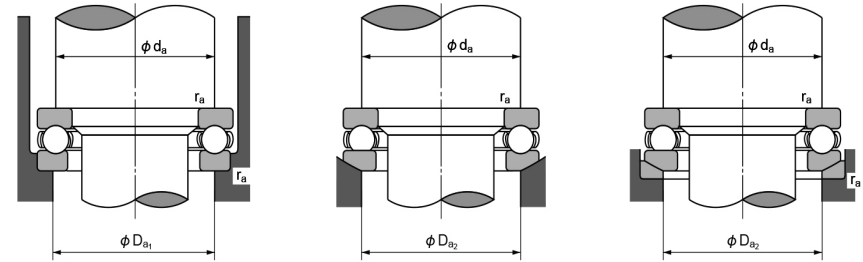
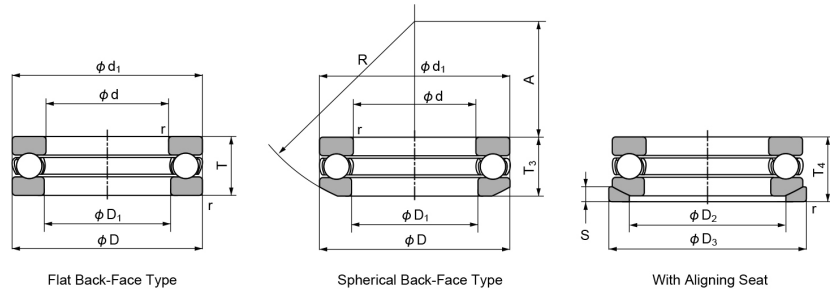
Boundary Dimensions						Basic Load Rating		Limiting Speed		Bearing Designation		
(mm)						(kN)		(rpm)		Flat Back-Face Type	Spherical Back-Face Type	With Aligning Seat
d	D	T	T3	T4	r	Cr	Cor	Grease	Oil			
					(min)							
85	150	49	53.1	58	1.5	206.00	490.00	1100	1700	51317	53317	53317U
85	180	72	77	83	2.1	288.00	685.00	850	1200	51417	53417	53417U
90	120	22	-	-	1	59.50	190.00	1900	2900	51118	-	-
90	135	35	38.5	42	1.1	116.00	325.00	1400	2100	51218	53218	53218U
90	155	50	54.6	59	1.5	213.00	525.00	1100	1600	51318	53318	53318U
90	190	77	81.2	88	2.1	305.00	750.00	790	1100	51418	53418	53418U
100	135	25	-	-	1	85.00	268.00	1700	2500	51120	-	-
100	150	38	40.9	45	1.1	146.00	410.00	1300	1900	51220	53220	53220U
100	170	55	59.2	64	1.5	236.00	595.00	1000	1500	51320	53320	53320U
100	210	85	90	98	3	345.00	895.00	710	1000	51420	53420	53420U
110	145	25	-	-	1	87.00	288.00	1600	2400	51122	-	-
110	160	38	40.2	45	1.1	152.00	450.00	1200	1900	51222	53222	53222U
110	190	63	67.2	72	2	267.00	705.00	880	1300	51322	53322	53322U
110	230	95	99.7	109	3	435.00	1240.00	640	960	51422	53422	53422U
120	155	25	-	-	1	89.00	305.00	1600	2400	51124	-	-
120	170	39	40.8	46	1.1	154.00	470.00	1200	1800	51224	53224	53224U
120	210	70	74.1	80	2.1	310.00	870.00	790	1100	51324	53324	53324U
120	250	102	107.3	118	4	455.00	1340.00	580	880	51424	53424	53424U
130	170	30	-	-	1	104.00	350.00	1300	2000	51126	-	-
130	190	45	47.9	53	1.5	203.00	620.00	1000	1500	51226	53226	53226U
130	225	75	80.3	86	2.1	330.00	960.00	730	1100	51326	53326	53326U
130	270	110	115.2	128	4	555.00	1750.00	540	810	51426	53426	53426U
140	180	31	-	-	1	107.00	375.00	1300	1900	51128	-	-
140	200	46	48.6	55	1.5	205.00	650.00	1000	1500	51228	53228	53228U
140	240	80	84.9	92	2.1	350.00	1050.00	680	1000	51328	53328	53328U
140	280	112	117	131	4	545.00	1750.00	520	780	51428	53428	53428U
150	190	31	-	-	1	109.00	400.00	1200	1900	51130	-	-
150	215	50	53.3	60	1.5	213.00	650.00	940	1400	51230	53230	53230U
150	250	80	83.7	92	2.1	360.00	1130.00	670	1000	51330	53330	53330U
150	300	120	125.9	140	4	615.00	2010.00	480	720	51430	53430	53430U

Dimensions								Abutment and Fillet Dimensions				Mass Approx		
(mm)								(mm)				(kg)		
D1	d1	D2	D3	S	R	A		da	Da1	Da2	ra	Flat Back-Face Type	Spherical Back-Face Type	With Aligning Seat
(min)	(max)							(min)	(max)	(max)	(max)			
88	150	115	155	17.5	112	43		124	111	115	1.5	3.660	3.65	4.45
88	177	130	185	23	140	47		142	123	130	2	9.300	9.2	10.9
92	120	-	-	-	-	-		108	102	-	1	0.680	-	-
93	135	110	140	13.5	100	45		117	108	110	1	1.770	1.78	2.22
93	155	120	160	18	112	40		129	116	120	1.5	3.880	3.84	4.7
93	187	140	195	25.5	140	40		150	130	140	2	11.000	10.7	12.6
102	135	-	-	-	-	-		121	114	-	1	0.990	-	-
103	150	125	155	14	112	52		130	120	125	1	2.360	2.36	2.87
103	170	135	175	18	125	46		142	128	135	1.5	5.110	5.12	6.1
103	205	155	220	27	160	50		166	144	155	2.5	14.700	14.5	17.2
112	145	-	-	-	-	-		131	124	-	1	1.080	-	-
113	160	135	165	14	125	65		140	130	135	1	2.570	2.53	3
113	187	150	195	20.5	140	51		158	142	150	2	7.730	7.66	8.96
113	225	170	240	29	180	59		182	158	170	2.5	19.800	19.4	22.9
122	155	-	-	-	-	-		141	134	-	1	1.160	-	-
123	170	145	175	15	125	61		150	140	145	1	2.860	2.76	3.4
123	205	165	220	22	160	63		174	156	165	2	10.600	10.4	12.4
123	245	185	260	32	200	70		198	172	185	3	25.000	24.6	29.2
132	170	-	-	-	-	-		154	145	-	1	1.870	-	-
133	187	160	195	17	140	67		166	154	160	1.5	4.100	4.03	4.91
134	220	177	235	26	160	53		187	168	177	2	12.700	12.6	15.2
134	265	200	280	38	200	58		214	186	200	3	31.400	30.4	36.7
142	178	-	-	-	-	-		164	156	-	1	2.030	-	-
143	197	170	210	17	160	87		176	164	170	1.5	4.470	4.4	5.61
144	235	190	250	26	180	68		200	180	190	2	15.500	15.3	18.2
144	275	206	290	38	225	83		224	196	206	3	33.900	32.9	39.9
152	188	-	-	-	-	-		174	166	-	1	2.160	-	-
153	212	180	225	20.5	160	79		189	176	180	1.5	5.740	5.6	7.28
154	245	200	260	26	200	89.5		210	190	200	2	16.300	16	19.1
154	295	225	310	41	225	69		240	210	225	3	41.600	40.5	48.5

Single Direction Thrust Ball Bearings

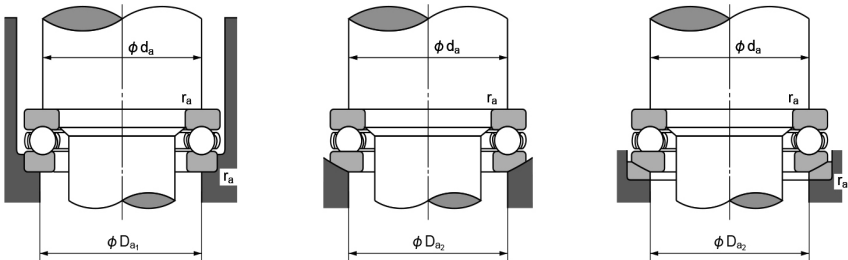
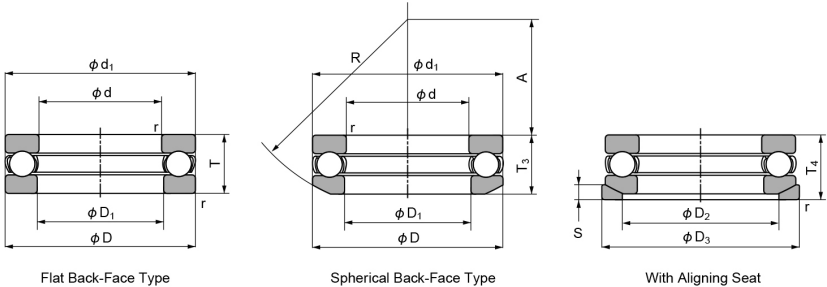


Single Direction Thrust Ball Bearings



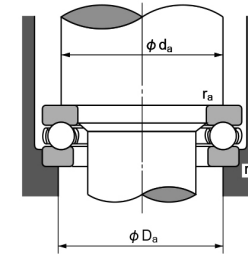
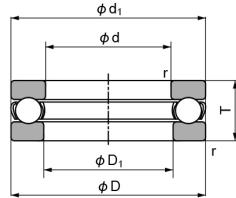
Boundary Dimensions						Basic Load Rating		Limiting Speed		Bearing Designation		
(mm)						(kN)		(rpm)		Flat Back-Face Type	Spherical Back-Face Type	With Aligning Seat
d	D	T	T3	T4	r	Cr	Cor	Grease	Oil			
					(min)							
160	200	31	-	-	1	112.00	425.00	1200	1800	51132	-	-
160	225	51	54.7	61	1.5	223.00	720.00	900	1300	51232	53232	53232U
160	270	87	91.7	100	3	410.00	1340.00	610	920	51332	53332	53332U
160	320	130	135.3	150	5	680.00	2410.00	440	670	51432	53432	53432U
170	215	34	-	-	1.1	134.00	510.00	1100	1700	51134	-	-
170	240	55	58.7	65	1.5	261.00	835.00	840	1200	51234	53234	53234U
170	280	87	91.3	100	3	420.00	1430.00	600	900	51334	53334	53334U
170	340	135	141	156	5	755.00	2730.00	420	630	51434	53434	53434U
180	225	34	-	-	1.1	135.00	525.00	1100	1600	51136	-	-
180	250	56	58.2	66	1.5	266.00	875.00	810	1200	51236	53236	53236U
180	300	95	99.3	109	3	485.00	1700.00	550	820	51336	53336	53336U
180	360	140	148.3	164	5	785.00	2980.00	400	600	51436	53436	53436U
190	240	37	-	-	1.1	170.00	655.00	1000	1500	51138	-	-
190	270	62	65.7	73	2	310.00	1060.00	740	1100	51238	53238	53238U
190	320	105	111	121	4	570.00	2100.00	500	750	51338	53338	53338U
200	250	37	-	-	1.1	172.00	675.00	1000	1500	51140	-	-
200	280	62	65.3	74	2	315.00	1110.00	720	1000	51240	53240	53240U
200	340	110	118.4	130	4	625.00	2380.00	470	710	51340	53340	53340U
220	270	37	-	-	1.1	177.00	740.00	970	1400	51144	-	-
220	300	63	65.6	75	2	325.00	1210.00	690	1000	51244	53244	53244U
240	300	45	-	-	1.5	228.00	935.00	830	1200	51148	-	-
240	340	78	81.6	92	2.1	430.00	1730.00	570	860	51248	53248	53248U
260	320	45	-	-	1.5	232.00	990.00	800	1200	51152	-	-
260	360	79	82.8	93	2.1	445.00	1880.00	550	830	51252	53252	53252U
280	350	53	-	-	1.5	315.00	1350.00	700	1000	51156	-	-
280	380	80	85	94	2.1	450.00	1950.00	530	800	51256	53256	53256U
300	380	62	-	-	2	370.00	1660.00	610	920	51160	-	-
300	420	95	100.5	112	3	585.00	2720.00	450	680	51260	53260	53260U
320	400	63	-	-	2	380.00	1760.00	590	880	51164	-	-
320	440	95	100.5	112	3	595.00	2830.00	440	660	51264	53264	53264U

Dimensions							Abutment and Fillet Dimensions				Mass Approx		
(mm)							(mm)				(kg)		
D1	d1	D2	D3	S	R	A	da	Da1	Da2	ra	Flat Back-Face Type	Spherical Back-Face Type	With Aligning Seat
(min)	(max)						(min)	(max)	(max)	(max)			
162	198	-	-	-	-	-	184	176	-	1	2.270	-	-
163	222	190	235	21	160	74	223	202	190	1.5	6.640	6.5	8.29
164	265	215	280	29	200	77	226	204	215	2.5	21.000	20.5	24.5
164	315	240	330	41.5	250	84	256	224	240	4	51.200	49.7	58.9
172	213	-	-	-	-	-	197	188	-	1	3.270	-	-
173	237	200	250	21.5	180	91	212	198	200	1.5	8.130	7.89	9.95
174	275	220	290	29	225	105	230	210	220	2.5	22.000	21.3	25.7
174	335	255	350	46	250	74	272	238	255	4	60.100	58.1	69.1
183	222	-	-	-	-	-	207	198	-	1	3.370	-	-
183	247	210	260	21.5	200	112	222	208	210	1.5	8.690	8.26	10.5
184	295	240	310	32	225	91	252	228	240	2.5	28.200	27	32
184	355	270	370	46.5	280	97	288	252	270	4	69.500	68.8	81.5
193	237	-	-	-	-	-	220	210	-	1	3.950	-	-
194	267	230	280	23	200	98	238	222	230	2	11.700	11.5	14
195	315	255	330	33	250	104	268	242	255	3	36.100	35.8	41.9
203	247	-	-	-	-	-	230	220	-	1	4.14	-	-
204	277	240	290	23	225	125	248	232	240	2	12.2	12	14.8
205	335	270	350	38	250	92	284	256	270	3	43.000	43.1	51
223	267	-	-	-	-	-	250	240	-	1	4.510	-	-
224	297	260	310	25	225	118	268	252	260	2	13.500	13	16.2
243	297	-	-	-	-	-	276	264	-	1.5	7.350	-	-
244	335	290	350	30	250	122	300	280	290	2	23.100	22.3	27.4
263	317	-	-	-	-	-	296	284	-	1.5	7.940	-	-
264	355	305	370	30	280	152	320	300	305	2	25.000	24	29.7
283	347	-	-	-	-	-	322	308	-	1.5	12.000	-	-
284	375	325	390	31	280	143	340	320	325	2	27.000	26.2	32.3
304	376	-	-	-	-	-	348	332	-	2	17.100	-	-
304	415	360	430	34	320	164	372	348	360	2.5	42.300	41.7	49.9
324	396	-	-	-	-	-	368	352	-	2	18.500	-	-
325	435	380	450	36	320	157	392	368	380	2.5	44.700	43.8	52.7



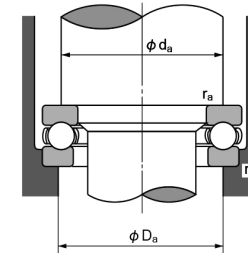
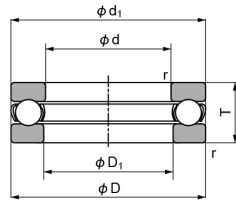
Boundary Dimensions							Basic Load Rating		Limiting Speed		Bearing Designation		
(mm)							(KN)		(rpm)		Flat Back-Face Type	Spherical Back-Face Type	With Aligning Seat
d	D	T	T3	T4	r	Cr	Cor	Grease	Oil				
					(min)								
340	420	64	-	-	2	385.00	1860.00	570	850	51168	-	-	
340	460	96	100.3	113	3	600.00	2940.00	430	640	51268	53268	53268U	
360	440	65	-	-	2	395.00	1960.00	550	820	51172	-	-	
360	500	110	116.7	130	4	745.00	3800.00	380	570	51272	53272	53272U	

Dimensions							Abutment and Fillet Dimensions				Mass Approx		
(mm)							(mm)				(kg)		
D1	d1	D2	D3	S	R	A	da	Da1	Da2	ra	Flat Back-Face Type	Spherical Back-Face Type	With Aligning Seat
(min)	(max)						(min)	(max)	(max)	(max)			
344	416	-	-	-	-	-	388	372	-	2	19.9	-	-
345	455	400	470	36	360	199	412	388	400	2.5	47.6	46.4	56.2
364	436	-	-	-	-	-	408	392	-	2	20.4	-	-
365	495	430	510	43	360	172	444	416	430	3	69.0	67.7	81.5

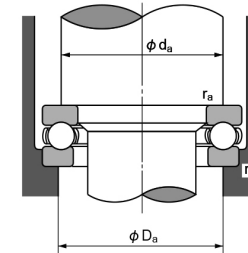
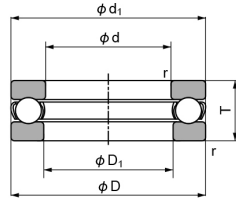


Boundary Dimensions				Basic Load Rating		Limiting Speed		Bearing Designation
(mm)				(KN)		(rpm)		
d	D	T	r	Cr	Cor	Grease	Oil	
			(min)					
10	26	12	0.6	12.70	17.10	5600	8400	2900
12	28	12	0.6	13.20	19.00	5400	8100	2901
15	31	12	0.6	14.30	22.80	5100	7700	2902
18	35	12	0.6	14.40	24.70	4800	7300	2903
20	37	12	0.6	14.80	26.60	4700	7100	2904
22	42	14	0.6	18.90	34.50	4100	6100	2904 1/2
25	45	14	0.6	19.30	37.00	3900	5900	2905
30	50	14	0.6	20.20	42.00	3900	5600	2906
35	55	16	0.6	29.90	62.00	3300	5000	2907
40	60	16	0.6	31.00	70.00	3200	4800	2908
45	68	16	0.6	32.50	77.50	3000	4500	2909
50	74	18	0.6	38.50	94.00	2700	4100	2910
55	78	18	0.6	40.00	103.00	2600	4000	2911
60	82	18	0.6	40.50	108.00	2600	3900	2912
65	90	20	0.6	47.50	129.00	2300	3500	2913
70	95	20	0.6	49.00	140.00	2200	3400	2914
75	100	20	0.6	51.00	151.00	2200	3300	2915
80	110	22	0.6	57.00	171.00	2000	3000	2916
85	115	22	0.6	59.00	184.00	1900	2900	2917
90	120	22	0.6	59.50	190.00	1900	2900	2918
95	130	25	0.6	75.50	236.00	1700	2600	2919
100	135	25	0.6	78.00	253.00	1700	2500	2920
105	140	25	0.6	78.50	262.00	1600	2500	2921
110	145	25	0.6	78.00	262.00	1600	2400	2922
115	150	25	0.6	73.50	245.00	1600	2400	2923
120	160	27	0.6	94.00	314.00	1500	2200	2924
125	165	27	0.6	85.50	298.00	1400	2200	2925
140	185	31	0.6	106.00	375.00	1300	1900	2928

Dimensions		Abutment and fillet Dimensions			Mass Approx
(mm)		(mm)			
D1	d1	da	Da	ra	
(min)	(max)	(min)	(max)	(max)	(kg)
10.2	26	19.6	16.4	0.6	0.035
12.2	28	21.6	18.4	0.6	0.037
15.2	31	25	21	0.6	0.041
18.2	35	28	25	0.6	0.045
20.2	37	30	27	0.6	0.055
22.2	42	34	30	0.6	0.085
25.2	45	37	33	0.6	0.093
30.2	50	42	38	0.6	0.107
35.2	55	47	43	0.6	0.137
40.2	60	52	48	0.6	0.150
45.2	68	59	54	0.6	0.199
50.2	74	64	60	0.6	0.255
55.2	78	69	64	0.6	0.270
60.2	82	73	69	0.6	0.275
65.2	90	80	75	0.6	0.374
70.2	95	85	80	0.6	0.400
75.2	100	90	85	0.6	0.425
80.2	110	98	92	0.6	0.600
85.2	115	103	97	0.6	0.640
90.2	120	108	102	0.6	0.670
95.2	130	116	109	0.6	0.795
100.2	135	121	114	0.6	0.930
105.2	140	126	119	0.6	1.020
110.2	145	131	124	0.6	1.150
115.2	150	136	129	0.6	1.250
120.2	160	144	136	0.6	1.350
125.3	165	149	141	0.6	1.480
140.3	185	167	158	0.6	2.330



Boundary Dimensions				Basic Load Rating		Limiting Speed		Bearing Designation		Dimensions		Abutment and fillet Dimensions			Mass Approx
(mm)				(KN)		(rpm)				(mm)		(mm)			
d	D	T	r	Cr	Cor	Grease	Oil			D1	d1	da	Da	ra	(kg)
			(min)												
25	52	16	1	27.10	50.50	3400	5200	3905		25.2	52	42	36	1.0	0.147
30	60	19	1	38.00	72.50	2900	4400	3906		30.2	60	49	43	1.0	0.237
35	68	22	1	50.50	99.00	2500	3800	3907		35.2	68	56.5	48.5	1.0	0.346
40	76	25	1	61.00	119.00	2200	3400	3908		40.2	76	63	55	1.0	0.486
45	85	28	1	79.50	163.00	2000	3000	3909		45.2	85	71	61	1.0	0.684
50	92	31	1	97.00	202.00	1800	2800	3910		50.2	92	77	67	1.0	0.889
55	100	33	1	110.00	240.00	1700	2600	3911		55.2	100	83.5	73.5	1.0	1.114
60	106	35	1.5	119.00	263.00	1600	2400	3912		60.2	106	89	79	1.5	1.293
65	112	36	1.5	128.00	287.00	1500	2300	3913		65.2	112	95.5	83.5	1.5	1.443
70	120	38	1.5	143.00	335.00	1400	2200	3914		70.2	120	102	90	1.5	1.767
75	128	41	1.5	159.00	365.00	1300	2000	3915		75.2	128	108.5	96.5	1.5	2.132
80	136	44	1.5	183.00	425.00	1200	1900	3916		80.2	136	115	101	1.5	2.606
85	145	47	1.5	207.00	490.00	1100	1700	3917		85.2	145	122	108	1.5	3.157
90	155	50	1.5	232.00	555.00	1100	1600	3918		90.2	155	131	115	1.5	3.907
95	165	54	1.5	253.00	630.00	1000	1500	3919		95.2	165	139	123	1.5	4.810
100	172	57	1.5	250.00	630.00	980	1400	3920		100.2	172	144	128	1.5	5.454
105	180	60	2.5	257.00	670.00	930	1400	3921		105.2	180	153	137	2.5	6.354
110	190	63	2.5	293.00	785.00	880	1300	3922		110.2	190	159	141	2.5	7.333
115	200	66	2.5	315.00	870.00	840	1200	3923		115.2	200	167.5	147.5	2.5	8.526
120	210	69	2.5	325.00	930.00	800	1200	3924		120.2	210	178	158	2.5	10.195



Boundary Dimensions				Basic Load Rating		Limiting Speed		Bearing Designation		Dimensions		Abutment and fillet Dimensions			Mass Approx
(mm)				(KN)		(rpm)				(mm)		(mm)			
d	D	T	r	Cr	Cor	Grease	Oil			D1	d1	da	Da	ra	(kg)
			(min)												
9.525	25.400	13.494	0.8	11.80	15.20	5400	8100	O - 3		9.925	24.606	19.1	15.9	0.8	0.036
12.700	32.544	15.875	0.8	18.60	25.10	4300	6500	O - 4		13.097	31.750	24.6	20.6	0.8	0.077
15.875	35.719	15.875	0.8	19.40	28.30	4100	6200	O - 5		16.272	34.925	27.8	23.8	0.8	0.086
19.050	38.894	15.875	0.8	21.40	34.50	4000	6000	O - 6		19.447	38.100	29	26	0.8	0.095
22.225	42.069	15.875	0.8	21.90	37.50	3800	5800	O - 7		22.622	41.275	34	30	0.8	0.100
25.400	45.244	15.875	1.6	22.50	41.00	3700	5500	O - 8		25.797	44.450	37	33	0.8	0.110
28.575	48.419	15.875	1.6	24.10	47.00	3600	5400	O - 9		28.972	47.625	40	37	0.8	0.128
31.750	53.181	18.256	1.6	27.90	54.50	3200	4800	O -10		32.147	52.388	45	40	0.8	0.164
34.925	56.356	18.256	1.6	28.60	58.00	3100	4600	O -11		35.322	55.562	48	43	0.8	0.186
38.100	59.531	18.256	1.6	30.50	66.00	3000	4500	O -12		38.497	58.738	51	47	1	0.200
41.275	62.706	18.256	1.6	26.70	63.00	2900	4400	O -13		41.672	61.912	54	50	1	0.210
44.450	68.262	19.050	1.6	32.50	77.50	2700	4100	O -14		44.847	67.469	59	54	1	0.260
47.625	71.438	19.050	1.6	37.50	89.00	2700	4000	O -15		48.021	70.644	62	57	1	0.285
50.800	75.406	19.050	2.4	38.00	94.00	2600	3900	O -16		51.594	74.613	66	61	1	0.300
53.975	81.756	22.225	2.4	49.50	118.00	2300	3500	O -17		54.769	80.962	71	65	1.6	0.405
57.150	84.931	22.225	2.4	50.50	125.00	2300	3400	O -18		57.944	84.138	74	68	1.6	0.450
60.325	91.281	25.400	2.4	58.00	145.00	2000	3100	O -19		61.119	90.488	79	73	1.6	0.590
63.500	94.456	25.400	2.4	59.50	152.00	2000	3000	O -20		64.294	93.662	82	76	1.6	0.610
66.675	97.631	25.400	2.4	60.50	160.00	2000	3000	O -21		67.469	96.838	85	79	1.6	0.660
69.850	102.394	25.400	2.4	71.50	179.00	1900	2900	O -22		70.644	101.600	89	83	1.6	0.700
73.025	105.569	25.400	2.4	75.50	199.00	1900	2800	O -23		73.819	104.775	93	86	1.6	0.730
76.200	111.125	28.575	3.2	77.00	209.00	1700	2600	O -24		77.788	109.538	97	90	2	0.900
82.550	122.238	31.750	3.2	97.50	252.00	1600	2400	O -26		84.138	120.650	106	98	2	1.300
88.900	128.588	31.750	3.2	99.00	266.00	1500	2300	O -28		90.488	127.000	113	105	2	1.320
95.250	134.938	31.750	3.2	98.50	289.00	1500	2200	O -30		96.838	133.350	119	111	2	1.360
101.600	147.638	34.925	3.2	113.00	310.00	1300	2000	O -32		103.188	146.050	129	120	2	1.880
114.300	166.688	44.450	4.8	157.00	435.00	1100	1700	O -36		115.888	165.100	146	135	3	3.180
127.000	185.738	50.800	4.8	193.00	545.00	1000	1500	O -40		128.588	184.150	162	150	3	4.540
139.700	204.788	55.562	4.8	248.00	715.00	910	1300	O -44		141.288	203.200	179	166	3	5.900
152.400	220.662	60.325	4.8	269.00	805.00	830	1200	O -48		153.988	219.075	193	180	3	7.250